

## Health in Chile

*This article is based on a report by Prof. Hernán Romero, department of preventive medicine, School of Medicine, University of Chile, Santiago. The report was prepared for the Standing Committee on Public Health and Medical Sciences, 10th Pacific Science Congress, August 21–September 6, 1961, Honolulu, Hawaii.*

Geographically and in spirit, Chile has always been an island. Because it has been separated from the rest of the world by its rugged geography, Chile has attracted comparatively little immigration since the coming of the Spaniards in the mid-16th century. Most of the people are of Spanish descent with a considerable infusion of Indian blood.

Most of Chile's health problems are interrelated with social and economic conditions. In the wake of a rapidly increasing population, the per capita income has declined 10 percent over the past 30 years, to \$315. A feudal system of land ownership, inefficient means of food production, and lack of industrialization are among the conditions that deter the building of an economy capable of large-scale improvement in public health and welfare.

The shortage of adequate water supplies creates a major health and economic problem. Only 55 percent of the urban and 6 percent of the rural population have a satisfactory supply of drinking water; 40 percent of the urban and virtually none of the rural population are served by an adequate sewage system.

The morbidity rate for typhoid fever has fluctuated between 60 and 82 cases per 100,000 population during the last 10 years. Because of modern drugs the corresponding mortality rate has dropped from 80 to 2.6. Enteroparasitic infections are another serious problem arising from poor sanitary conditions.

The infant mortality rate in 1960 was 132.5 per 1,000 live births. Malnutrition and infant diarrhea take a heavy toll of infants.

The caloric deficiency in the average diet is estimated to be 11 percent. Of children entering hospitals, 20 or 25 percent are suffering from considerable degrees of nutritional deficiency.

Goiter is endemic. In a survey carried out among 63,000 school children, perceptible goiter was found in 16.4 percent, and the rates by areas ranged between 11 and 33.5 percent.

The prevalence of alcoholism was estimated to be 3 out of 100 adults in 1950. In a 1954 survey of 20,000 persons over age 15 in a working-class district, 9 percent were classified as alcoholics and 29 percent as intermittent drunkards.

The tuberculosis mortality rate is about 60 per 100,000 population. Until the 1940's, the rate was constantly above 200. Venereal disease had largely been eliminated as a major problem, but a recrudescence is now suspected.

Epidemics of diphtheria still occur in spite of an active inoculation program. The specific mortality rate has been gradually rising in the past 5 years and in 1960 was more than 5 per 100,000. The mortality rate for whooping cough is slightly lower. For measles, the mortality rate is about 28. In 1921, smallpox vaccination was finally made compulsory, and the disease was considered eradicated about 10 years later.

Rabies is endemic, with outbreaks recurring fairly regularly every 5 years. In 1951 and 1955 there were 11 cases of human rabies each time. In 1960 there were 7 human cases, 580 cases of animal rabies registered, and 8,776 biting dogs in Santiago under observation.

The rheumatic fever mortality rate fell from 22 per 100,000 population in 1926 to 14 in 1956.

The prevalence of cardiovascular diseases in general is relatively low. The mortality rate recorded for 1959 is 125 per 100,000 population. The low prevalence of cardiovascular diseases is partly explained by the fact that average life expectancy at birth has only recently reached 55 years. Many people still die of diseases that are prevented or efficaciously treated in more advanced countries and therefore do not live to become victims of cardiovascular diseases.

The mortality rate for malignant tumors was 103 per 100,000 population in 1950. For some unknown reason, the rate of mortality from cancer of the digestive organs is twice as high as the corresponding U.S. rate after adjustment for age distribution. Moreover, 60 percent of all deaths from cancer are ascribed to cancer of the digestive organs.

Cirrhosis of the liver shows a rate of increase greater than any other morbid process. The mortality per 100,000 population has increased from 3.4 in 1920 to 21.6 in 1959. This seems to be a genuine increment for many reasons, the most important of which is that it is supported by independent and reliable hospitalization data. On the basis of available data, the increasing rate cannot be attributed to lower nutrition levels or increased alcohol consumption.

Deaths by violence in Chile occurred at a rate of 86.7 per 100,000 population in 1958. Accidents are responsible for one out of seven deaths among males over 1 year of age, for two out of three deaths among males in the 20-25 age group, and for one out of four deaths among females in the 15-19 age group.

Mental health in Chile has received very little study, but mental problems are presumably being aggravated by rapid urbanization, breaking up of the family, and other major social and cultural changes.

Public health services in Chile had their beginning at an early date when the Spanish crown obtained a papal authorization to collect tithes on the condition that a part of them would be used for works of charity. To fulfill this provision, several institutions for the spiritual and physical comfort of the sick were set up. Following a long period of evolution, these

hospitals were grouped together in 1932 to form the Social Welfare Services. A department of public health was not created until 1925. Until then, epidemics were fought by temporary groups organized for the particular emergency.

In 1952, the Social Welfare Services, which operated most of the hospitals, joined with the health department and the medical services of the workers' social insurance system to form the National Health Service. This body is now the main public health agency in Chile and also provides medical care for workers, their families, and the indigent.

Complementary acts made it obligatory for all physicians to be members of the College of Medicine, a sort of guild, and established a national register of physicians. A great majority of physicians have become part-time or full-time public servants with remunerations fixed according to number of hours worked plus premiums based on years of service and responsibilities carried.

So far, the effects on public health of this new organization of services have fallen short of expectations, perhaps because it is still in a period of adjustment. Also, the decline in the national economy that began in 1953 tended to depress any new efforts in public health while worsening existing health conditions. Medical expenditures per capita, which had increased during 1945-53 at an average annual rate of 10 percent, began to decline in 1953 by 1.3 percent yearly. The infant mortality curve also reversed direction in 1953 and began to rise.

Because of the rapid growth of the population, the task of training medical personnel is becoming more and more acute. There are about 6 physicians per 10,000 population. In the actual geographic distribution there are 13 physicians per 10,000 population in Santiago and 0.5 per 10,000 in one of the provinces. There are four medical schools and one school of public health in the country.

To ease the effects of the shortage of nurses and social workers, ancillary medical personnel such as nursing auxiliaries and administrators are being trained to carry on more of the duties of nursing and social work.